

Butler Eagle

BC3 effort aims to spur entrepreneurship

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BUTLER TWP — **Butler County Community College's** machine technology laboratory is on its way to joining an international network intended to support innovation and entrepreneurship.

Matt Kovac, dean of the college's Natural Science & Technology division, said earlier this year BC3 applied to join a program called Fab Lab, which is a component of the Massachusetts Institute of Technology's Center for Bits and Atoms.



Student Brandt Fleming works on a 3-D printer in the machine technology lab at Butler County Community College. JUSTIN GUIDO/BUTLER EAGLE

To be a part of Fab Lab, organizations must have a workshop that has standard tools and technologies, as well as the people to support them, Kovac said.

Some of those tools include a computer-controlled laser cutter, a computer numerically controlled milling machine, a sign cutter, a precision milling machine that makes three-dimensional molds and surface-mount circuit boards, and programming tools for embedded processors.



BC3 Student Zach Staebler works on laser printer in the Fab Lab. JUSTIN GUIDO/BUTLER EAGLE

Kovac said Fab Labs are open to the public to support the “maker movement” of allowing anyone to learn, try new ideas and prototype designs they have made.

Being a Fab Lab means an institution is connected to a global community of learners, educators, technologists, researchers, makers and innovators, he said.

He said BC3 is excited about being more involved as a business incubator.

Currently, there are Fab Labs in 30 countries, according to the Fab Foundation, which is a nonprofit organization that oversees the development of the network.

BC3's lab is in the Science, Technology & Cultural Center on the main campus in Butler Township. It supports hands-on work tied to many classes.

Once accepted to the registry, BC3's lab would become the second in Pennsylvania, with the other at Northampton Community College in Bethlehem. There are more than 60 in the United States. Kovac said to be accepted as a Fab Lab, the school had to buy a new three-dimensional printer and a laser engraving machine.

In addition to the required list of equipment, other machines in the lab include a noncontact 3-D laser scanner, an injection mold and a computer numerically controlled router. Mike Robinson, assistant professor, said the technology can help innovators turn their designs into reality. He said 3-D printing, in particular, has the potential to revolutionize the way products are made. 3-D printing, also referred to as additive manufacturing, makes parts by adding material, such as a resin or a metal, together in many tiny steps. With 3-D printing, a designer can hold the new object just minutes after sending it to the printer.

“If you get more and more people teaching these techniques, you'll end up with more and more possibilities,” he said.

As the technology progresses, it is becoming more affordable. The school's new 3-D printer cost a fraction of one bought several years ago. It also is much smaller.

“This looks like the early '80s and the onset of the computer industry,” Robinson said.